

WHAT IS CLAIMED:

1 1. A method for use in a mobile station, the method comprising the steps of:
2 attaching to a wireless data network; and
3 performing variable quality of service negotiation with the wireless data network.

1 2. The method of claim 1 wherein the performing step includes the steps of:
2 transmitting to the wireless data network a quality of service information element
3 comprising a downgradeable quality of service class field that is indicative of requesting
4 multiple traffic classes in a priority order.

1 3. The method of claim 1 wherein the performing step includes the steps of:
2 transmitting to the wireless data network a quality of service information element
3 comprising an upgradeable quality of service class field that is indicative of requesting a
4 higher traffic class than an existing traffic class.

1 4. The method of claim 1 wherein the performing step includes the steps of:
2 transmitting to the wireless data network a quality of service information element
3 comprising at least one traffic class field for conveying requests for either a single traffic
4 class or multiple traffic classes in a priority order.

1 5. The method of claim 1 wherein the performing step includes the step of using
2 an activate packet data protocol (PDP) context procedure that supports downgradeable
3 QoS requirements.

1 6. A method for use in a first packet server of a wireless network, the method
2 comprising the steps of:
3 exchanging messages with a second packet server for the purpose of providing at
4 least one service to a mobile station, wherein the exchanging step includes the step of
5 transmitting to the second packet server a message comprising a quality of
6 service information element comprising a quality of service class field that is
7 indicative of requesting multiple traffic classes in the message.

1 7. The method of claim 6 wherein the quality of service class field is indicative of
2 requesting a downgradeable quality of service class field and the multiple traffic classes are
3 requested in a priority order.

1 8. The method of claim 6 wherein the quality of service class field is indicative of
2 requesting an upgradeable quality of service class field.

1 9. The method of claim 6 wherein the exchanging step includes the step of using
2 an activate packet data protocol (PDP) context procedure that supports variable QoS
3 requirements.

1 10. A method for use in a first packet server of a wireless network, the method
2 comprising the steps of:

3 exchanging messages with a second packet server for the purpose of providing at
4 least one service to a mobile station, wherein the exchanging step includes the step of
5 transmitting to the second packet server a message comprising a quality of
6 service information element comprising at least one traffic class field for conveying
7 requests for either a single traffic class or multiple traffic classes.

1 11. The method of claim 10 wherein the exchanging step includes the step of
2 using an activate packet data protocol (PDP) context procedure that supports
3 downgradeable QoS requirements.

1 12. The method of claim 10 wherein the multiple traffic classes represent a priority
2 order.

1 13. A packet server comprising:
2 a transceiver for exchanging messages with a second packet server for the purpose
3 of providing at least one service to a mobile station; and
4 a processor for causing to be transmitted to the second packet server a message
5 comprising a quality of service information element comprising a quality of service class
6 field that is indicative of requesting multiple traffic classes in the message.

1 14. A packet server comprising:
2 a transceiver for exchanging messages with a second packet server for the purpose
3 of providing at least one service to a mobile station; and
4 a processor for causing to be transmitted to the second packet server a message
5 comprising a quality of service information element comprising at least one traffic class
6 field for conveying requests for either a single traffic class or multiple traffic classes.

1 15. A transmission frame representing data embodied in a wireless transmission
2 signal, the transmission frame comprising:
3 a quality of service class field that is indicative of requesting multiple traffic classes
4 in a priority order; and
5 at least one traffic class field for conveying the priority order.

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